**MAIL STOP PCT**
Attorney Docket No. 26533U
PCT/IE2003/000047

**REMARKS**

The above amendments have been made to remove multiple dependencies from the claims and to conform them to U.S. practice. No new matter has been added.

Respectfully submitted,

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Date: December 21, 2004

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GMN/JLM/ng: PrelimAmend

**Attachment A**

1. (original) A residual current detection circuit comprising means for detecting an imbalance current indicative of a residual current and providing an output whose amplitude corresponds to the magnitude of the residual current, the output being applied simultaneously to two channels wherein the first channel provides a first signal and the second channel provides a second signal which is time delayed with respect to the first signal, the output of each channel being applied to a circuit stage which produces an output only when the first and second signals are coincident at its input.

2. (original) A residual current detection circuit comprising means for detecting an imbalance current indicative of a residual current and providing an output whose amplitude corresponds to the magnitude of the residual current, the output being applied simultaneously to two channels wherein the first channel includes means for providing a first signal when the amplitude of the output exceeds a first level, and wherein the second channel includes a capacitor which acquires a charge corresponding to the

amplitude of the output and means for providing a second signal in response to the voltage on the capacitor exceeding a second level, the circuit further including means for providing an output signal only when the first signal is coincident with the second signal.

3. (original) A residual current detection circuit as claimed in claim 2, wherein the output of the detecting and providing means is a voltage, wherein the first channel connects the output voltage to a first input terminal of an AND gate, the first input terminal having a first threshold defining said first level whereby the first signal is produced at said AND gate when the output voltage exceeds the first threshold, and wherein the second channel connects the capacitor voltage to a second input terminal of the AND gate, the second input terminal having a second threshold defining said second level whereby the second signal is produced at said AND gate when the capacitor voltage exceeds the second threshold, the output signal being produced by the AND gate upon coincidence of the first and second signals.

4. (original) A residual current detection circuit as claimed in claim 2, wherein the output of the detecting and providing means is a voltage, wherein the first channel includes a first comparator for comparing the output voltage with a first reference voltage and providing said first signal as output when the output voltage exceeds the first reference voltage, and wherein the second channel includes a second comparator for comparing the capacitor voltage with a second reference voltage and providing an output signal when the capacitor voltage exceeds the second reference voltage, the said second signal either being constituted by, or being derived from, the second comparator output signal.

5. (original) A residual current detection circuit as claimed in claim 4, wherein the second channel further includes a current source which charges up a second capacitor upon the occurrence of a second comparator output signal and a third comparator for comparing the second capacitor voltage with a third reference voltage and providing an output signal when the second capacitor voltage exceeds the third reference voltage.

6. (original) A residual current detection circuit as claimed in claim 5, wherein the second channel includes a fourth comparator for comparing the capacitor voltage with a fourth reference voltage higher than the second reference voltage and providing an output signal when the capacitor voltage exceeds the fourth reference voltage, wherein the second channel further includes a second current source which assists the first current source to charge up the second capacitor upon the occurrence of a fourth comparator output signal.

7. (currently amended) A residual current detection circuit as claimed in claim 5 ~~or 6~~, further including means for adjusting the magnitude(s) of the current(s) supplied by the current source(s).

8. (currently amended) A residual current detection circuit as claimed in claim 5, ~~6, or 7,~~ wherein the third comparator output voltage constitutes the said second signal.

9. (currently amended) A residual current detection circuit as claimed in ~~any one of claims~~

~~4 to 8~~ claim 4, wherein the means for providing an output signal only when the first signal is coincident with the second signal comprises a switching device which applies a disabling clamp to the output of the first comparator except during the occurrence of the second signal.